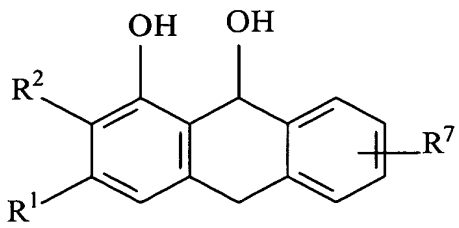
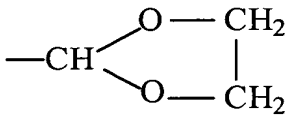
Process I

A compound represented by the general formula (IV)



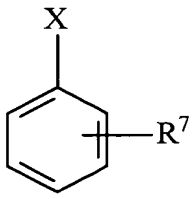
(IV)

(wherein R^1, R^2 and R^3 each independently represents a hydrogen atom, a methyl group or a methoxy group, and R^7 represents a group



or $-CH(OC_2H_5)_2$)

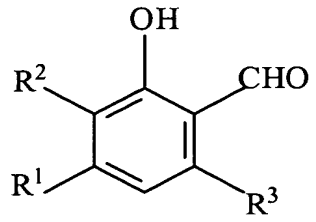
can be obtained by acting a halide Grignard reagent represented by a general formula (III)



(III)

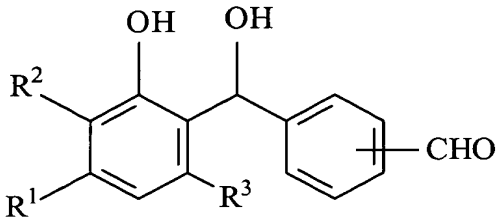
(wherein X represents a bromine atom or a chlorine atom and R^7 is as define above)

to an aldehyde represented by a general formula (II)



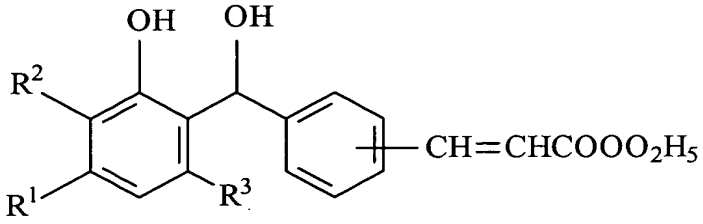
(II)

(wherein R^1, R^2, and R^3 are as defined above). The compound (IV) is converted into an aldehyde represented by a general formula (v)



(V)

an acid, for example, hydrochloric acid. A compound represented by a general formula (VI)

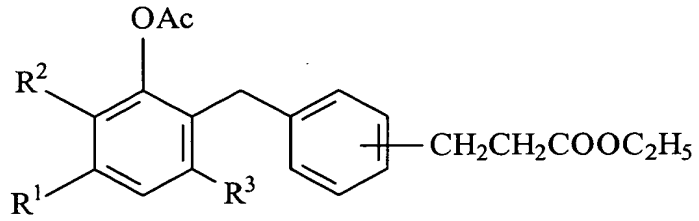


(VI)

(wherein R^1, R^2, and R^3 are as defined above) can be obtained by acting Witting reagent of triethylphosphonoacetate to the aldehyde.

C1

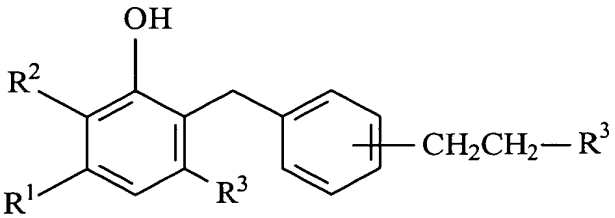
The compound (VI) is converted into an acetylated compound by reacting thereto, acetic anhydride in the presence of a base, for example, pyridine, and, subsequently, the acetylated compound is catalytically reduced in the presence of palladium black in glacial acetic acid to obtain a compound represented by a general formula (VII)



(VII)

(wherein R^1, R^2, and R^3 are as defined above).

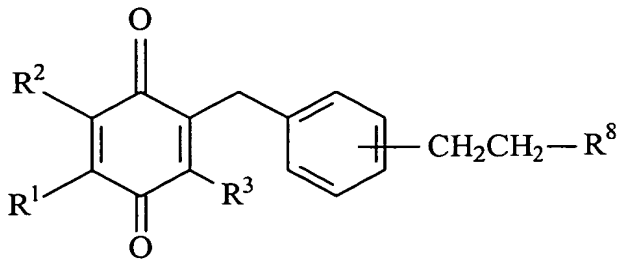
The compound (VII) is subjected to hydrolysis, reduction or esterification through a conventional method to obtain a compound represented by a general formula (VIII)



(VIII)

(wherein R^1, R^2, and R^3 are as defined above and R^8 represents a hydroxymethyl group, a carboxyl group, or a lower alkoxycarbonyl group).

Subsequently, the compound (VIII) is oxidized with oxygen in the presence of potassium nitrosodisulfonate or salcomine, to obtain the compound of the present invention of the general formula (Ia)



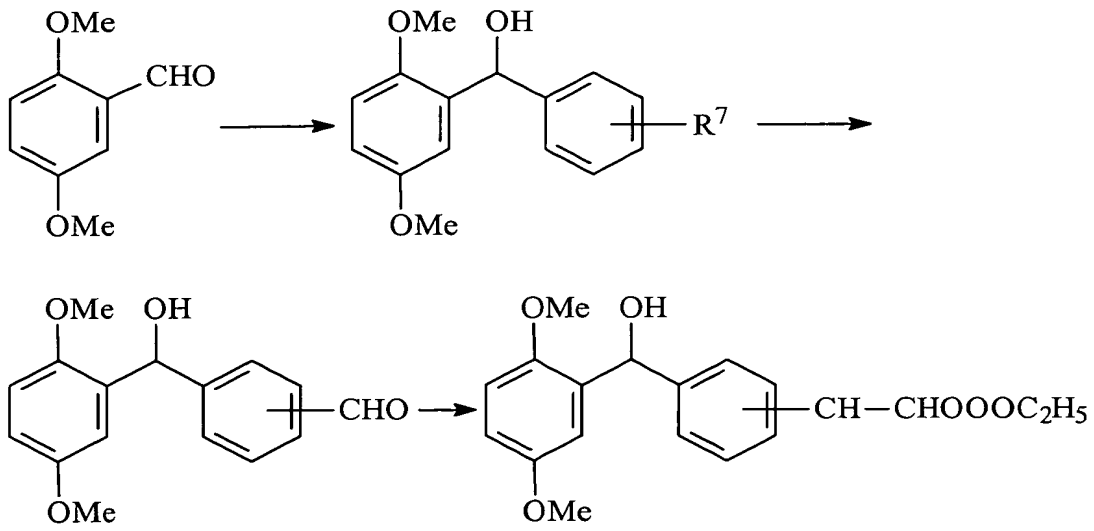
(Ia)

(wherein R^1, R^2, and R^3 are as defined above).

The compound of the present invention may be also produced by the following method:

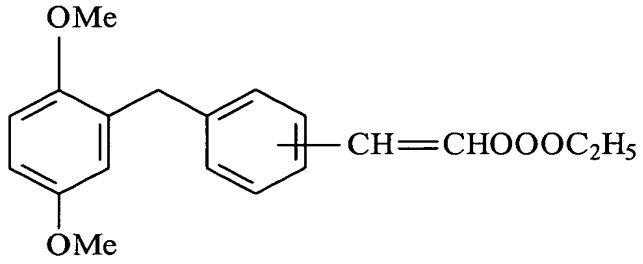
Process II

A compound of a general formula (IX) can be obtained from 2,5-dimethoxybenzaldehyde through the following route as described above.



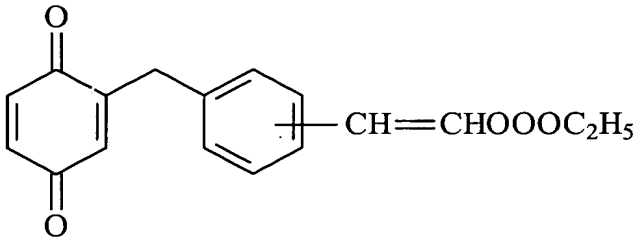
(IX)

The compound (IX) is converted into a chloride using thionychloride, etc. and, then, is subjected to dechlorination, for example reduction with zinc-glacial acetic acid to obtain a compound of a formula (X).



(X)

The compound represented by a formula (Ib) of the present invention can be obtained by oxidation of the compound (X) with ammonium nitrate cesium (hereinafter abbreviated to CAN).



(Ib)

The compound (Ib) may be converted into various compounds of the present invention through hydrolysis, reduction, amidation, etc., as appropriate, under conventionally employed condition.--